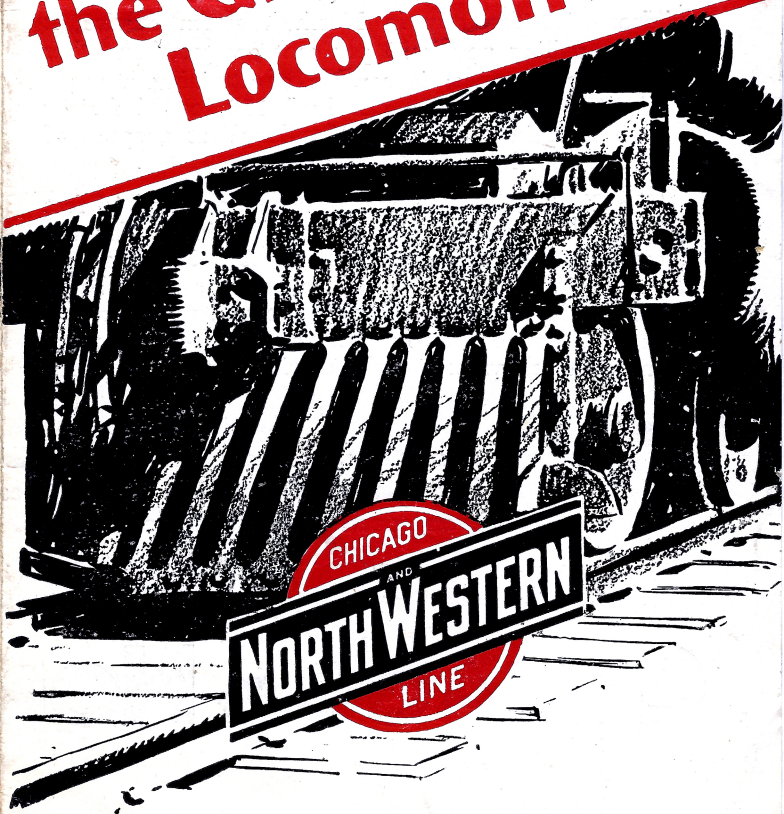
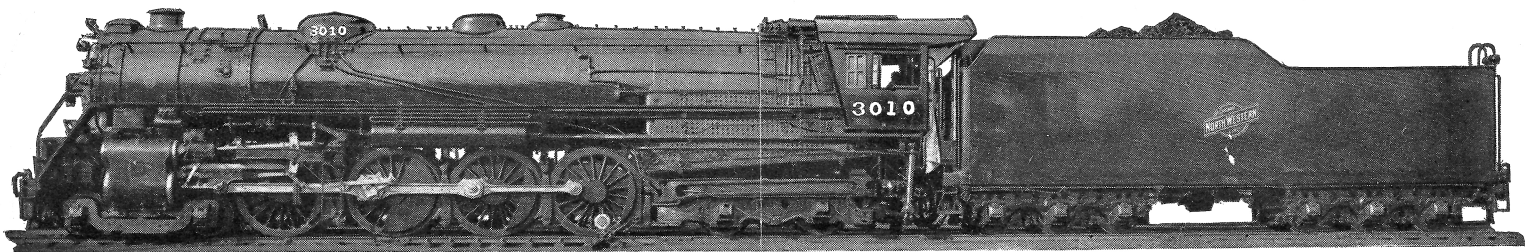




The Story of the Giant Class "H" Locomotive



Largest Dual Service Locomotive in the World



THE GIANT CLASS "H"

IT is with pleasure we present the Chicago & North Western Railway's latest and finest contribution to the field of modern steam locomotives. A mighty thing is this giant Mogul of the Rails. To appreciate its tremendous power and mammoth size, permit us to point out these facts: The Class "H" weighs nearly twice as much as any locomotive formerly in North Western service; it has a pulling power 50 per cent greater than other passenger engines; is capable of attaining a speed of 85 miles an hour; can haul 150 loaded freight cars (a train about $1\frac{1}{3}$ miles long) at a speed of 50 miles an hour!

The Class "H" is 103 feet 4 inches long and 16 feet high. The main frame and the cylinders for the engine is a single steel casting 58 feet, 3 inches long and weighs 73,000 pounds, no bolts or rivets being used in its assembly. The engine and tender weigh 818,000 pounds. It has sixteen wheels—four front engine truck wheels, eight driving wheels and four

trailer wheels. The diameter of the driving wheels is 76 inches. The tractive power of the Class "H" is 71,800 pounds, with an additional 12,400 from a booster engine for use in starting. The tender has a water capacity of 18,000 gallons and a coal capacity of 20 tons. Steel plates for the tender tank are all welded together and onto a one-piece steel casting which forms the frame and the bottom of the tender tank, no bolts or rivets being used in the construction. There are 35 of these mammoth locomotives now in service on the Chicago & North Western Railway, each representing a cost of \$120,000. They perform a dual service, being used either as passenger or freight locomotives . . . and the transition from the one to the other is simply a matter of pulling a lever!

Automatic train control equipment is also a feature of the Class "H". This device automatically stops the train when it approaches another train or slows it to a 20-mile-an-hour speed in restricted areas. Thus safety is assured travelers under all conditions.

Here, then, is an outstanding contribution to fast, comfortable train travel. The Class "H" enables North Western passenger trains to maintain an even speed uphill and downhill . . . it eliminates jerky starts and stops . . . it assures a smooth-running train at all times.

CHICAGO & NORTH WESTERN RY.

Many ask for

TECHNICAL INFORMATION

on the

CLASS "H" LOCOMOTIVE

Here it is:

Gauge.....4' 8½"
 Cylinders.....27"x32"
 Valves.....Piston,.....14" dia.
 Valve Gear—
 Walschaerts....Engs. 3006-3035
 Baker....." 3001-3005

BOILER

Type.....Conical
 Outside diam. 1st course.....90¾"
 " " 3rd course.....100"
 Working pressure.....275 lbs.
 Fuel.....Soft coal

FIREBOX

Material.....Steel
 Staying.....Radial
 Length.....150⅛"
 Width.....96¼"
 Depth, front.....95½"
 " back.....75½"

TUBES

Diameter.....3½".....2"
 Number.....214.....51
 Length.....21'0".....21'0"

HEATING SURFACE

Firebox.....292 sq. ft.
 Combustion chamber....116 sq. ft.
 Tubes.....4656 sq. ft.
 Firebrick tubes.....21 sq. ft.
 Thermic syphons.....129 sq. ft.
 Total.....5214 sq. ft.
 Superheater.....2357 sq. ft.
 Grate area.....100 sq. ft.

DRIVING WHEELS

Diameter, outside.....76"
 " center.....68"
 Journals—
 Main and intermediate 13½"x14"
 Front and back.....12"x14½"

ENGINE TRUCK WHEELS

Diameter, front.....36"
 Journals.....7½"x14"
 Diameter, trailing—
 Front.....44"
 Back.....50"
 Journals.....9"x14"

WHEEL BASE, ETC.

Driving.....20'6"
 Rigid.....13'4"
 Total engine.....48'7"
 Total engine and tender.....91'1"
 Length over couplers.....103'4"

WEIGHT

in working order

On driving wheels.....288,000 lb.
 On truck, front.....87,000 lb.
 " " back.....123,000 lb.
 Total engine.....498,000 lb.
 Total engine and tender .818,000 lb.

TENDER

Wheels, number.....Twelve
 " diameter.....36"
 Journals—
 Roller bearing Engs. ...3001-3025
 6½"x12" " " ...3026-3035
 Tank capacity...18,000 U. S. Gal.
 Fuel " 20 tons

Tractive force, engine...71,800 lb.
 " " booster...12,400 lb.

Total...84,200 lb.
 Passenger or freight

Equipped with Type E superheater, feed-water heater, stoker, three thermic syphons, power reverse, booster, one-piece cast steel cylinders and locomotive bed, train control, and air brake on all driving and tender wheels, with two 8½" cross-compound pumps.

